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GOVERNOR
MARY B. NEWMAN
SECRETARY
MANPOWER AFFAIRS
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COMMISSIONER

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REPORT
TO
THE PLASTICS INDUSTRY OF MASSACHUSETTS
FROM
GOVERNOR'S SPECIAL ACTION FORCE
ON
PETRO-CHEMICAL -- PLASTICS INDUSTRY

PREPARED BY

MASSACHUSETTS DEPARTMENT OF COMMERCE & DEVELOPMENT
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THE COMMONWEALTH OF MASSACHUSETTS
EXECUTIVE DEPARTMENT
STATE HOUSE • BOSTON 02133

FRANCIS W. SARGENT
GOVERNOR

March 21, 1974

To The Massachusetts Plastics Industry:

The plastics industry in our State faces difficult times. No other industry has been harder hit by the energy crisis. No other industry is more important to the continued growth of our State's economy. If it falters, other industries will follow.

Today I am happy to be able to send to you this Report from my Special Action Task Force on the Petro-Chemical and Plastics Industry. This Report contains good news and bad. It documents that we have made progress with the Federal government on lifting Phase IV Price Controls, on a priority allocation under the Mandatory Allocation Program. But it also says that the shortage may be with us until 1976.

I am very grateful to the Task Force and the Department of Commerce & Development for assisting me in preparing this document. It is a well researched compilation of the most authoritative information available. While it does not and cannot predict a quick end to the shortage, I hope it will enable you to plan for your company with some degree of certainty.

This Report is not the conclusion of the efforts by state government to assist the plastics industry. The Department of Commerce & Development has conducted a survey of the industry. I have presented the plight of the industry to the Cost of Living Council, which subsequently lifted Phase IV Controls. I have met with ten of the biggest plastics suppliers to explain the unique problems we face in Massachusetts. This Report is another step. More action is needed and it will follow.

This Report outlines many recommendations to you, to us in state government and to the Federal government. I ask you to assist me in developing a state government policy on this problem by reviewing these recommendations and writing to me with your suggestions and modifications.

With best wishes,

Sincerely,

Francis W. Sargent

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REPORT TO THE PLASTICS INDUSTRY OF MASSACHUSETTS
FROM
GOVERNOR'S SPECIAL ACTION TASK FORCE ON PETRO-CHEMICAL--PLASTICS INDUSTRY

The State of Massachusetts, being acutely aware of the materials supply problem directly affecting the Plastics Industry, has undertaken through its Governor's Special Action Task Force and the Department of Commerce and Development, a state-wide project of properly identifying these shortages and their total impact on the economy, in hopes of maintaining and improving the supply of plastics materials -- the life blood of over 700 manufacturers.

The members of the Governor's Special Action Task Force on Petro-Chemical -- Plastics Industry were chosen using as criteria geographic location, reference/interest organizations, and industry wide representation and expertise. The members are Messrs. George Brouillette, Robert A. Chadbourne, Aldo Crugnola, Clarence Daniels, F. Reed Estabrook, Jr., William Gibbs, George E. Pickering and Everett L. Stewart. (1)

To date one informational meeting and five workung sessions have been held at the Department of Commerce and Development, including one with the Governor, in his office. The Task Force's primary concern has been to identify the multiple problems causing the plastics industry of Massachusetts.

In January, 1974, one of the first acts of the Governor's Task Force was the preparation and presentation of a Position Paper, (2) derived from the expertise of the Task Force members and reinforced

(1) Addendum 1

(2) Addendum 2

by the Department of Commerce and Development's Plastics Industry Survey. (3)

In essence, five problem areas were specifically highlighted, i.e Allocation, Phase IV Price Control, Exports, Unemployment Compensation and Financial Assistance. It's gratifying to note that at present three of five listed problem areas have been positively acted upon by the Federal Government.

The Task Force recommended that the Federal Government assume the cost of unemployment compensation directly attributable to the energy crisis. In January Governor Sargent drafted and took to Washington legislation which would require this. The entire Massachusetts Congressional Delegation supported this, and Senator Kennedy and Congressman Conte have agreed to introduce it.

Phase IV Price Controls on plastics were partially lifted January 30 after the Task Force, Governor Sargent, and the Massachusetts Congressional Delegation alerted the COLC about the serious impact price controls were having on the Massachusetts plastics industry. Recently all price and wage controls were completely lifted from all processors, except those doing $100,000,000 plus of business per year.

Allocations in general are counterproductive to the essence of the problem of how to increase the supply of plastics materials which get shipped into a processor's plant. A close watch is being kept by the Task Force and responsible State officials, on the existing upstream allocation programs which have been enacted. Depending upon results of the latter, the Task Force will make appropriate recommendations through Governor Sargent and the Massachusetts Congressional Delegation to FEO/COLC and the petrochemical industry, urging them to extend allocations downstream.

(3) Addendum 3

In order to evaluate the total economic impact and duration of these shortages on the State's economy; e.g. 700 manufacturing firms supporting directly 43,000 jobs with 430,000 jobs depending on their output (domino effect), it became obvious during the deliberations on the shortages that direct information from the plastics materials suppliers was essential.

At the invitation of the Governor, ten plastics material suppliers (

BORDEN CHEMICAL CO.
BORG-WARNER CORPORATION
E. I. DUPONT DE NEMOURS
EXXON CHEMICAL CO.
FOSTER GRANT CO., INC.
GENERAL ELECTRIC CO.
MONSANTO CO.
PHILLIPS PETROLEUM CO.
REICHHOLD CHEMICALS, INC.
UNION CARBIDE CORPORATION

were asked to participate in an orientation/working session, conducted jointly by Commissioner Frederick A. Centanni of the Department of Commerce and Development and Mr. F. Reed Estabrook, Jr., Chairman of the Governor's Task Force.

Based on a consensus arrived at during this meeting with the Material Suppliers, the Task Force came to the following conclusions:

(4) Addendum 4

1. The material shortage is real, is finite, and is not confined to Massachusetts, New England, or even the United States. The fact that the shortages are world-wide has intensified the market pressures.

2. Most molding materials are affected, although some of the "engineering" materials (thermoplastic as well as thermosetting) are and have been available in quantity.

3. The substantial shortage of plastics materials appeared rather suddenly, although predictions of the inability of supply to meet demand was foreseen at least one year earlier. The shock produced by the shortage, however, was widespread and dramatic. The analysis of the general conditions leading to the shortage is complicated and covers basically the entire system, starting with crude oil and ending with plastic materials. Such a system is illustrated below:

Crude Oil → Oil Refinery → Petrochemical Feedstocks (eg. naphtha) → Petrochemical Manufacturing Plant → Petrochemicals (eg. benzene) →
Chemical Manufacturing Plant → Plastic Precursors (eg. styrene monomer) → Plastics Manufacturing Plant → Plastic Materials (eg. Polystyrene)

During the late 1960's and early 1970's most of the petrochemical feedstocks and petrochemicals were in surplus; hence, prices were low and little incentive existed for the refinery operators to invest in new and additional plants. Similarly, the chemicals required for the manufacture of plastics and the plastics materials themselves were available in surplus and at low prices. As a result, essentially no plant expansions in refinery or petrochemical manufacturing were implemented during this period.

The period from late 1971 through 1973 produced an unparalleled rate of growth for use of plastics worldwide, substantially over the historical average rate of growth. This had the affect of essentially balancing supply and demand in mid-1972, and led to minor increases in plant capacity in increase output to meet the demand. The rate of increase in demand proceeded unabated through the remainder of 1972 and into 1973. Delays in shipment and other indicates of shortages began to appear regularly by mid-1973. Accompanying this increased demand for plastic materials, the nation also experienced increased demand for petroleum products generally, particularly gasoline and heating oil.

At about this point, internation complications began to decrease the amount of crude oil and refined products imported by the United States; which accounts for about 10% of our total crude oil needs, but over 20% of the total crude oil and refining products consumed in the United States. This produced a pronounced and sharp effect on the availability of petroleum derived feedstocks for plastics. This was further complicated by the world-wide petroleum shortage, which reached crisis proportions in Europe and Japan, both primarily dependent upon the mid-Eastern crude supply. This, in turn, caused severe competition for the available crude, which, superimposed upon increased prices for crude by mid-Eastern producers, rapidly increased the price of imported crude to hitherto unknown levels. This led to exceptionally high prices for refined petroleum products, including particularly petrochemical feedstocks.

The effect has shown itself as a substantial factor, limiting importation of expensive crude and refined products into the United States, particularly because of the wage and price regulation existent in this country. These regulations limited the ability of the United States manufacturers to recover their increased materials costs. In addition, the much higher prices available in Europe and Asia for petroleum products, including petrochemicals and plastic materials themselves, has given the United States producer of these products an especially attractive export market. Products sold in these markets do not fall under our Phase IV wage and price controls which affect domestic sales. We note the resulting profits are taxed less.

In summary, shortage of plastics materials now results from a lack of, generally, the petrochemical feedstocks necessary for plastics materials production. The greatest constraint on the petrochemical feedstocks' availability is the supply of crude oil. However, if the crude oil were available in sufficient quantity to run the existing refineries at capacity, and if plastic materials demand continues at near recent levels the total refinery output will in turn be a constraint. New refinery plants require a minimum of 3 years to bring on line, hence, the earliest point for new refinery capacity to become effective is projected for mid-1976. The overall problem is highly complex and involves the interrelation of United States manufacturing capabilities all along the line.

4. The ways of affecting the general problem are as complicated as the description of the causes above. Principally, as each constraint is removed, another constraint appears to limit growth beyond a somewhat higher level. The current constraint is crude oil supply. Next is crude oil refining capacity and aromatics conversion and recovery. Beyond this the chemical manufacturing and plastics production capacities will equally pose constraints.

The stair-step syndrome will go into effect. Much new capacity will be planned and built, providing prices are right for such investment. When this new capacity comes on stream all along the line, supply will meet demand, until demand rises, as it always has in the past, and supply and demand come into phase again. Then a new planning and construction cycle starts once again.

In general, it must also be recognized that in times of tight supplies, as in the case of gasoline, the problems and practices of the normal distribution system can cause varying surpluses and shortages in the supply of a particular material, in several geographical areas simultaneously.

5. Specific plastics material supply analysis shows:

Polyvinyl chloride (PVC)

Production is plant restricted and should be the same in '74 as in '73. Some relief in sight for '75 and '76.

Polystyrene

Production is limited by feedstock and ethylene. Much plant capacity is available for which feedstock may not be available in large amounts through '75.

Polyethylene

Permanently limited by plant capacity. Two new Union Carbide plans will come on stream in '74 and '75, but only add about 3% to capacity.

ABS

Production is limited by feedstock. Plant capacity seems adequate. Ethylene and benzene.

Nylon

Nylon 6 is cut back approximately 30%, Benzene related shortage. Du Pont is bringing on new Nylon 6/6 capacity in '75 to increase production 49%. Bringing this new capacity on stream may be hampered by feedstock shortage.

Acrylics

On allocation to amounts less than last year because of acetone shortage. Current curtailment about 90%--expected to improve as results of Shell fire disappear.

Acetal

Derived from natural gas. Minor shortage caused by plant capacity.

Phenolics

Production generally at a 60% level because of feedstock. Benzene needed for phenol.

Substantial increases in the price of plastics materials are to be expected. The primary influence on material prices will be exerted by the availability and price of the building block chemicals--benzene, propylene, and ethylene. These, in turn, reflect the price of the basic raw materials, the natural gas liquids, and crude oil fractions. The average price of a barrel of crude oil has more than quadrupled during the past year. The price of benzene and propylene have both doubled, and more, in the past five years, and are expected

to increase at least 25% more during the next five year period. Ethylene increased only 25% during the past five years, but is expected to approximately double during the next 5 years.

These price trends in basic materials and feedstocks will naturally manifest themselves in the ultimate prices of the final plastics materials, materials which are expected to increase on an average of 50-75% during the next five years, with a major portion of the price increase taking place in the near term, as prices adjust themselves to the new supply-demand relationships.

On the basis of the above information, we recommend the following to the users of plastics materials in Massachusetts:

------Recognize and plan for an overall continuation of a 1973 type shortage, without the panic, through 1974 and 1975, and possibly into 1976.

------The shortages will definitely curtail expansion and growth as the plastics industry has known it, and all companies should be guided accordingly.

------Products based primarily on the availability of low-cost plastics materials for price markets should be scanned carefully. Materials at a relative low cost historically will not be available for several years, if ever.

------Companies should look at their products to determine if they will be able to continue to produce them; and if so, at what price. Will the products sell at that price?

------Companies with material/product problems must consider the viability of their business, and seek aid and counsel, if necessary, from the Massachusetts Department of Commerce and Development, and/or the SCORE program of the Small Business Administration.

-----Some plastics material suppliers are vertically integrated. The materials division may be a part of a large oil company, yet the division, in turn, is responsible for the administration and control of a plastics molding operation. Supplying material to this "captive" processing unit, as well as having

IV PROPOSED CORRECTIVE MEASURES cont.

5. PRIORITY RATING

AMALGAM OF NEW ENGLAND CONGRESSIONAL DELEGATIONS TO OBTAIN HIGHER MORE ADEQUATE PRIORITY RATING FOR PETROLEUM FEEDSTOCKS THAN THE INDUSTRY NOW RECEIVES

6. REASSESS FUEL OILS USAGE

EFFECT COHERENT CONSERVATION PROGRAMS IN GASOLINE AND HEATING OIL CONSUMPTION PRACTICES

7. MASSACHUSETTS: OFF-SHORE EXPLORATIONS

BROADEN ITS SUPPORT IN BEHALF OF MORE EFFECTIVE EXPLORATION PROGRAMS INVOLVING OFF-SHORE ENERGY DEPOSIT POTENTIALS

8. MASSACHUSETTS: NEW REFINERY

TAKE AN ACTIVE ROLE IN DEVELOPING REFINERY CAPABILITIES IN THE STATE AND NEW ENGLAND

to fulfill existing supply contracts, may place a severe strain on the company's ability to service spot sales to individual customers. There may be no material available for such spot sales, and companies who may have relied on this division as a source of supply in the past, may be just plain out of luck and material.

This report is as factual a picture of the materials situation as could be developed. In its implications it is pessimistic. The situation could turn out to be more favorable depending on certain factors. We suggest caution in evaluating these factors optimistically.

1. Recession

   If general business activity is down, we can expect less demand. This would mean that existing supplies of materials will go farther.

2. Petro-chemicals

   If for some reason the demand lessens for the competing uses for benzene, propylene, ethylene, etc., large quantities would be released for use in the manufacturing of feedstock for plastics material.

3. Specific Uses

   If automobiles, housing, appliances and other big users of plastics continue to be slow, available supplies of materials should increase, e.g. polystyrene; the swing from shortage to surplus is the difference of a few hundred million pounds. It doesn't take many events to push the swing from the present famine to a possible feast.

4. Allocations

   If the federal government suddenly changed the allocation system of the petro-chemical companies for plastics material manufacture use, so that they get all the feedstocks needed, at the expense of some other industries, we might rapidly have more of some materials than we could readily use. It must be remembered that there are continuingly being developed new uses for plastics materials, so that new demands may easily counter a slack off in an existing area. The industry wants to grow despite its present supply problems.

The solutions to many of the problems alluded to lie, as usual, at the federal level - Washington, and we offer the following:

1. Price Control

We recommend elimination of all remaining wage and price controls affecting our industry because of their continuing adverse effect on the production of plastics materials.

> The partial elimination of Phase IV price controls has helped somewhat, but favorable tax advantages on exports and on materials handled through DISC's (Domestic International Sales Corporations), with the domestic pricing structure as it stands, still make it advantageous to ship feedstocks and plastics materials out of the USA. Domestic incentives must be encouraged.
> Elimination of price controls will give the producers of feedstocks and materials, in the various steps from the barrel of crude oil, or the gas well-head, the chance to bid successfully on the products they need. Suppliers will be able to sell domestically without profit restraint which can now be avoided by exporting.

2. Allocation

We recommend a change in the allocation of crude oil to maximize the product of petrochemicals.

> Many of the newer, larger refineries, which are capable of turning out large amounts of petrochemicals, have had to reduce their output to 76%, and sell excess crude oil above this figure to other refineries having less. The latter refineries generally do not have the ability to produce large fractions of petrochemicals.
> Allocations should be changed to obtain the largest amount possible of petrochemicals for the plastics industry. Those companies which now import more crude then they are allowed to use should be encouraged to import all the crude they are able to and be allowed to refine it, in order to maximize their production of petrochemicals.

3. Exports

We favor the elimination of all controls and a return to a free economy as soon as practicable.

> We deem it advisable to continue surveillance of export trends, without urging any additional controls of other

Government-imposed regulations at the present time.

However, if such surveillance shows a disportionate amount of raw materials are being exported, the solution required to correct this situation will be sought.

Exports are essential for our participation in world trade, and to earn overseas dollars in the balance of payments struggle.

each plastics material supplier was required to submit an allocation plan to the COLC by March 1st, indicating areas into which his production would be going. Exports are allowed under such a program, and, of course, are necessary to the welfare of the United States.

The Task Force intends to keep a surveillance on the amounts of certain plastics materials which are exposed, and will bring to the attention of industry and governmental officials export quantities which we believe are excessive. These materials are polystyrene, PVC, low density polythylene, high density polyethylene, polypropylene, and phenolic.

Although much material is exported directly by the plastic material manufacturers, much flows overseas through exporters, new and old, over whom there is very little control or restraint.

(In the area of surveillance, while five materials showed modest increases or declines, PVC export shipments in January, 1974, according to United States Department of Commerce figures, were 25,904,000 pounds, a 59% increase over the September-December-average of 16,300,000 pounds per month).

4. Unemployment Compensation

Extended unemployment compensation benefits directly attributed to the energy crisis should be funded by the Federal Government rather than by the State Government.

5. Financial Assistance

The Congress, through the vehicle of S.B.A., or other appropriate agencies, is urged to provide adequate funding to assist plastics companies where indicated by critical conditions resulting from the energy crisis that may cause "shut-downs" and job loss.

6. Processors

We urge the plastics materials manufacturers and suppliers to recognize the plight of the processors (molders, extruders, sheet formers, etc.) and to do everything possible to make

material available to them, as a direct sale, or through the "compounders" or distributors, who usually have been the source of materials in the past.

- The smaller processor, of which, there are a great number in Massachusetts, buys in units of hundreds or thousands of pounds of a particular material. A dramatic breakdown in distribution has occurred. Many of the "Compounders"/distributors themselves have been short of materials for several months.
- The "compounders"/distributors must in turn service, fairly, with materials, the processors dependent upon them.

7. The Material Suppliers

We particularly urge the material supplier to develop an equitable means of supplying the Massachusetts processors, to hold together in vital form, an industry that is so important to the interests of the Commonwealth.

We believe the employment growth possibilities of the plastics industry exceed those of any other Massachusetts Industry.

8. Standard Industrial Classification

We recommend that the Massachusetts Department of Commerce and Development codify the industries in the Commonwealth by a seven digit-SIC number, instead of four, to more precisely define each company's individual operations and products. This would, for instance, help immensely in locating certain key Massachusetts industries quickly by EDP, or in alerting all companies in a particular group about impending material shortages or other crisis.

SUMMATION

The Plastics Industry in Massachusetts must realize:

-----The material shortage is real and will last, insome degree, through 1975, and perhaps into 1976.

-----The price of plastics materials has risen and will continue to rise until government regulations end, and a free market returns.

-----Each company should review its products to determine if it can remain viable during shortages and with increased prices, and plan accordingly.

-----Companies making products based on low cost resins must consider if they can sell these products in the future with the new material prices.

The Massachusetts Congressional Delegation in Washington:

-----Must recognize the plight of the plastics industry in Massachusetts, which employs 43,000 people, with a payroll of $315,000,000.

-----Must help to eliminate all price controls affecting our industry.

-----Must urge the Federal Energy Office to alter the allocation of petroleum to maximize the production of petrochemicals for plastics.

-----Must work to see that extended unemployment compensation benefits directly attributed to energy crisis are funded by the Federal Government, rather than by the State Government.

-----Must persuade Congress to provide funding, through SBA, or other appropriate agencies, to help plastics companies hit by the energy crisis.

As a Special Action Task Force created by Governor Sargent, we strongly recommend to him that he:

---------Urge his state agencies to continue to cooperate in every way to help the beleagured plastics companies sustain full employment.

---------Recognize the inherent strength, now and for the future, of the Massachusetts plastics industry, and to provide every opportunity for its growth and development.

---------Personally send copies of this report to each member of the Massachusetts Congressional Delegation, urging each to exercise his or her influence to help this all important growth industry.

---------Personally write and send copies to the appropriate federal agencies, urging them to act on the Task Force's recommendations, and to report back on those which they can proceed to implement.

---------Personally inform the Governors of other New England states of the measures he is undertaking, and to request their cooperation and support.

---------Personally write the chief executive officer of those companies who participated in the meeting with him and his Task Force on February 25th, and to those other companies who were unable to attend, urging each one to continue to supply their Massachusetts customers in a fair and equitable manner, to insure the survival and ultimate growth of our industry here in the Commonwealth.

LONG RANGE

As a Special Action Task Force, we have discussed in detail the problems and needs of the Plastics Industry in Massachusetts and are hopeful thev will be resolved with satisfaction by '75 or early '76.

Massachusetts "imports" too much from other nations and from other parts of our own United States.

The plastics/petrochemical industry creates products out of crude oil and natural gas: it doesn't burn except to create and maintain a chemical reaction. Massachusetts must have a continually growing Plastics Industry to create more jobs for our people and products we can "export". We are currently undergoing a traumatic downturn in that growth and are fighting for the survival of many companies all because we do not control enough of our own materials manufacturing, starting at the gas wellhead and rhe barrel of crude oil.

We all currently need gasoline and fuel oil. The by-products of the production of these vital energy materials are the petrochemicals, the basis building blocks of most of the plastics materials we use here in Masssachasetts.

Let's create our own sources of materials, be more self-sufficient, and be able to rely less on "imports". Let's refine our own oil and surround the refinery that should be built here in Massachusetts with petrochemical plants. More and more petrochemical products will be made from petroleum, as opposed to natural gas, through the advent of steam cracking (now so prevalent in Europe). What a base for our Plastics Industry these plants would create!

There will be no onvestment in a refinery, and therefore no petrochemical plants, without an assured supply of crude oil. Until we drill our own wells of the continental shelf, crude oil will be "imported" by mammoth tankers. In either case we must provide deep water ports as the link between the supply of crude oil and the inland refinery. An assured supply of crude oil could come from the Gulf Coast, but would more likely come from overseas, if the Federal Government would properly establish a firm oil policy.

But why depend upon other areas for crude oil and gas if supplies are available off our Massachusetts coast? Knowledgeable geologists say that the United States' largest unproven oil and gas reserves lie along the edge of the continental shelf--off Massachusetts shores.

We will never know for sure what is there until we drill to find out. We tolerated "Texas Towers" off shore for radar surveillance; also structures used as lighthouses, so why can't we accept drilling rigs?

The long-term growth and survival of the Plastics Industry is dependent upon an infinite supply of carbon and hydrogen, which can be reconstituted by the wonders of chemical engineering into the many plastics materials we now use and those which will emerge commercially in the future.

The greatest and most economical sources of carbon and hydrogen are crude oil and natural gas. We must do everything we can to use these limited resources and not just as fuels. We must develop and use alternate sources of energy wherever possible.

On a long range basis, the Task Force recommends:

1. Nuclear power be utilized to its fullest extent to reduce the need for fossel-fueled power stations. This implies a greater dependency upon electrical power for all uses.
2. Research and Development efforts must be directed to the alternate sources of energy to fully develop our own resources in line with the goals of "Project Independence" by 1980.

Solar energy.
Liquefaction and/or gasification of coal.
Oil from shale
Full utilization of all our crude oil resources.

3. "Project Independence", be directed toward the conservation of oil and gas by developing all possible sources of power, and that the United States government create and properly administer a positive Federal policy on the importation of crude oil to supply the refinery(s) we need in Massachusetts.

4. That at least one refinery be built in Massachusetts to supply the current needs for home heating and gasoline in the area, and to act as a source of petrochemicals for the Plastics Industry.

5. The chemical companies be encouraged to build petrochemical and feedstock plants to fully utilize the refinery output and thereby give the Massachusetts Plastics Industry nearby sources of materials.

6. The de-regulation of the price of matural gas be initiated in order to encourage prospecting for new wells to insure edquate supplies.

7. The offshore oil and gas exploration be undertaken at once, and if successful, full encouragement and assistance be given to developing a Massachusetts oil industry,

8. The Massachusetts Port Authority be encouraged and supported in itsstudy of the feasibility of an offshore deep water terminal.

These proposals are in the interest of Massachusetts, its economic-industrial base, and in a way its very survival. If we are always to be farthest from the gas fields; at the end of the pipelines, dependent on intermittent supplies of foreign crude and in general an "importer" of energy and petrochemicals, people other than the citizens of Massachusetts will control our destiny.

The initiative onour long-range recommendations belongs to Governor Sargent.

He can endorse them.

He can influence them on the Commonwelath and Federal Government.

He can create an atmosphere in which they can thrive.

We urge him to do so.

The Task Force plans to remain active to help implement this report, monitor those factors which pertain to the crisis and report to the Governor and the Massachusetts Plastics Industry on the progress of relevant events.

F. Reed Estabrook, Jr., Chairman
George Brouillette
Robert A. Chadbourne
Aldo Crugnola
Clarence Daniels
William Gibbs
George E. Pickering
Everett L. Stewart

Staff: Vincent R. Caroleo
Carl Eger, Jr.

March 15, 1974

Addendum 1

GOVERNOR'S SPECIAL ACTION TASK FORCE
on
PETRO-CHEMICALS--PLASTIC INDUSTRY

ally

Mr. F. Reed Estabrook, Jr. (Chairman)
President, New England Section
The Society of the Plastics Industry, Inc.
Brook Molding Corporation, President
30 Industrial Way
Norwood, Massachusetts 02062
(617) 762-4715

Mr. George Brouillette, General Manager
Reichhold Chemicals, Inc.
77 Lowell Junction Road
Andover, Massachusetts 01810
(617) 475-6600, ext. 35

Mr. Robert A. Chadbourne, President
Associated Industries of Massachusetts
4005 Prudential Tower
Boston, Massachusetts 02199
(617) 262-1180

Dr. Aldo Crugnole, Chairman-Dept. of Plastic Technology
Lowell Tech Institute
Lowell, Massachusetts 01854
(617) 454-7811, ext. 324

Mr. Clarence Daniels, Coordinator of Research
Activities for Pioneer Valley Section
of the Leominster Chamber of Commerce
46 Main Street
Leominster, Massachusetts 01453
(617) 537-1646

Dr. William Gibbs
Vice President & Director of Research Development
Foster Grant Co., Inc.
289 North Main Street
Leominster, Massachusetts 01453
(617) 534-6511

Mr. George E. Pickering
Treasurer, The Society of Plastics Engineers, Inc.
Arthur D. Little, Inc.
25 Acorn Park
Cambridge, Massachusetts 02140
(617) 864-5770, ext. 2143 or 2144

Mr. Everett L. Stewart, President
McKenzie & Co., Inc.
Elm Place
Pittsfield, Massachusetts 01201
(413) 448-8767

Addendum 2

GOVERNOR'S SPECIAL ACTION TASK FORCE

on

PETRO-CHEMICALS -- PLASTICS INDUSTRY

POSITION PAPER

January 22, 1974

The Governor's Special Action Task Force is convinced that there is an Energy Crisis. We believe it is real, pervasive, and its effects will be with us for a number of years. Our definition of Energy Crisis is that there is a greater demand than supply of petroleum and natural gas fuels and derivative products.

The shortage of materials for the plastics industry has become acute and is having an extreme effect on the approximately 113,000 people in Massachusetts dependent on the Plastics Industry - - the 43,000 directly employed by the industry and the 70,000 employed in jobs who are dependent on the products of the industry. This material shortage is not solely caused by the energy crisis but is also the consequence of the industry's phenomenal growth rate and the inability of the material suppliers to keep up with this growth.

The chain of events from a Massachusetts molding machine back to crude oil in a well in West Texas or Saudi Arabia is a long one, and one in which existing inventories have been largely depleted. Although overall plastics resin production in 1973 was about 14% greater than in 1972, certain plastics materials showed a lower production rate during the fourth quarter in 1973.

As a whole, the plastics industry has shown a 10-15% compounded growth rate over the past decade. The current demand for plastic products and the extrapolations made by the industry, indicate that this considerable growth can be expectdd to continue for some time to come - providing that current problems can be satisfactorily resolved. Manufacturing plants producing the precursors to the resins, the plants producing resins themselves, require substantial capital outlay. The current climate of uncertainty, regarding the availability of required feedstocks and the availability of petroleum products and natural gas for power, has resulted in a curtailment of new plant starts. With the expected growth in resin demand, this will result in an unfavorable resin supply situation in the future even if the feedstock situation is alleviated. Since a time lag of 2-3 years exists for new plants to be built, this current uncertainty could have a substantial long term effect. The current situation, therefore, has the effect not only of curtailing current manufacturing levels, but also affects the general situation for some time to come.

Exports have increased at a slightly higher rate than production (6.8% of production in 1972 to 7.8% in 1973, an increase of 15% in the annual rate). A levelling off and then a turn down in production of polystyrene and some other plastics resins., coupled with accelerating demand and some increases in exports has severely tightened an already acute supply problem in polystyrene and other resins.

During the past several months, firms supplying basic plastics materials have substantially tightened their credit terms to their customers. Where 45, 60, 90 or even 120 day credit terms were once common in the industry, today, credit is extended only to a 30 day period or less. This is a particularly harsh financial burden on small companies which predominate in Massachusetts.

The marketing practices for some resin manufacturers has tended to favor direct sales to a small number of large customers rather than a number of small customers. In the present situation of curtailed supply, this practice has resulted in some small companies lacking a supplier with whom he has an established relationship.

The shortage of feedstocks and other related supplies causes slowdowns in production and employment in plastics materials plants. At the same time, the rapidly worsening supply of the large volume plastics, and many other resins, has started severe cut backs in the processing plants all over the state. The Massachusetts Department of Commerce and Development's survey indicates a minimum projected loss of 15% of jobs in the plastics industry in the immediate future.

RESPONSE TO REDUCTION IN PRODUCTION WHICH WOULD RESULT IN CLOSING PLANT BY SIZE OF FIRM SHOWS:

Reduction to	Firm Size				
Close Down	20 & Fewer	21-50	51-100	over 100	Total
% & less	8	4	1	3	16
-10	4	4	-	2	10
1-20	13	5	5	1	24
1 30	29	10	7	4	50
1-40	8	14	8	5	35
1-50	27	24	10	12	73
ver 50	6	7	4	10	27
	95	68	35	37	235

The supply pipelines are largely empty, and most companies' inventories are down and/or depleted. Therefore, we must expect the situation to worsen before it improves.

It must be recognized that many employers and employees will be hurt and many jobs will be lost, not only in Massachusetts but all over the United States. The Task Force has addressed itself to developing a position and a program to combat the shortages which prevail and ease as much as possible the inevitable dislocation which is occurring.

Most of the plastics materialproblems are in the domain of the Federal Government, and therefore, all possible influence must be exerted in that direction to accomplish logical and proper ends.

On the Federal Level

1. Allocation

The Federal Energy Office has implemented on January 15, 1974, an allocation program in response to widespread shortages of petroleum derived products. Petrochemical feedstocks are recognized in this program and the suppliers of petrochemical feedstocks are required toprovide allocated amounts of those materials. The present program is too new to be evaluated on its effectiveness, and some 3 - 6 months may be necessary to evaluate the program. It may be that further steps in regulation will be necessary to insure the availability of resins and related materials to the plastics industry. If these steps appear necessary, current authorization provided to the FEO will be sufficient to affect them. A concerted effort, however, will be required to obtain action by FEO.

2. Phase IV - Decontrol

Remove immediately all Phase IV price controls on feedstocks, petrochemicals, and plastics materials and products to once again establish a free market. A free market is essential for the development of supplies to make it profitable for producers to sell their products in the United States, and to attract imports of petrochemicals. Better that we have higher priced materials, than none at all, to preserve jobs.

3. Exports

A free market should tend to slow down exports of petrochemicals and plastics material by making it as profitable for the producers to sell these products in this country.

However, because of the widespread unemployment with which the Plastic Industry is faced, the existing emergency powers of the Secretary of Commerce and the Chief of the Federal Energy Office should be used to license and limit exports of materials vital to the Plastics Industry to the same quarterly amounts as exported in 1972.

4. Unemployment Compensation

Extended unemployment compensation benefits directly attributed to the energy crisis should be funded by the Federal Government rather than the State Government.

5. Financial Assistance

The Congress, though the vehicle of S.B.A. or other appropriate agencies, is urged to provide adequate funding to assist plastics companies where indicated by critical conditions resulting from the energy crisis that may cause "shut-downs" and job loss.

We urge the Governor to strongly support these five recommendations; and to enlist the help of our Senators and Congressmen to put all possible pressure on the Cost of Living Council, the Federal Energy Office, and the Department of Commerce to see that these recommendations are carried out.

Addendum 3

COMMONWEALTH OF MASSACHUSETTS

DEPARTMENT OF COMMERCE AND DEVELOPMENT

Survey
of
PETRO-CHEMICAL--PLASTICS INDUSTRY
MATERIALS SUPPLY SHORTAGE

1973 - 1974

PETRO-CHEMICAL PLASTICS INDUSTRY

(Feedstock Crisis)

I PROBLEM IDENTITY

II PROBLEM EVALUATION

III PLASTICS INDUSTRY BACKGROUND

IV PROPOSED CORRECTIVE MEASURES

I PROBLEM IDENTITY

A. PROJECT FORMAT

1. SURVEY
2. PLANT VISITS
3. SELECTED PRIVATE INTERVIEWS
4. REGIONAL CONFERENCES
5. EXISTING SURVEYS AND STUDIES BY OTHERS

II PROBLEM EVALUATION cont.

B. SURVEY OF THE INDUSTRY

1. QUESTIONNAIRES

Number sent	953
Number of firms	678
Number returned	343
Returns as % of total number of firms	50.6%
Total number of employees	32,957
Returned questionnaire employees	19,852
Returns as % of total	60.2%

2. LAYOFFS

Total number of questionnaire employees 18,496

Current layoffs	852	or	4.6%
Projected layoffs	1,976	or	10.7%
Total layoffs	2,828	or	15.3%

3. INDICATED SHORTAGES

Average all firms	14.4%
Average of firms with shortages	26.4%

Major shortages: ABS, POLYSTYRENE,
POLYPROPYLENE

II PROBLEM EVALUATION cont.

B. SURVEY OF THE INDUSTRY cont.

4. EFFECT OF RAW MATERIAL REDUCTION ON THE NUMBER OF FIRMS

0-5% reduction	16 firms or 6.8% shutdown
6-10% reduction	10 firms or 4.3% shutdown
10% reduction	26 firms or 11.1% shutdown

5. VIEWS REGARDING CONTROLS

Voluntary controls	81 firms or 29.7%
Mandatory controls	110 firms or 40.3%
Total	199 firms or 70.0%
No controls	82 firms or 30.0%

III PLASTICS INDUSTRY BACKGROUND

A. PLUS FACTOR

   1. TRANSPORTATION

      Rates, costs and differentials

B. PHASE IV PRICING REGULATIONS

   1. FEEDSTOCK PRODUCERS RECEIVE HIGHER PRICES OVERSEAS

   2. STYRENE MONOMER IS USED IN A WIDE VARIETY OF RESINS

   3. PRIME INGREDIENT IN PRODUCING STYRENE IS BENZENE

   4. QUANTUM REDUCTION IN FEEDSTOCK FOR DOMESTIC USE

C. HIGH-VOLUME RESINS IN SHORTEST SUPPLY

   1. POLYSTYRENE

      Furniture, packaging, toys

   2. A.B.S. (ACRYLONITRILE-BUTADIENE-STYRENE)

      Wire and cable coverings, auto parts,pipes, bottles, heavy plastic films

   3. MOST LABOR INTENSIVE SEGMENT

III PLASTICS INDUSTRY BACKGROUND cont.

D. MARKET CONDITIONS

  1. PRICE-GOUGING (FAR WEST)
  2. TRANSPORTATION ECONOMICS
  3. REVERBERATIONS

E. FEEDSTOCKS A GLOBAL PROBLEM

  1. GEO-BUSINESS-POLITICAL
  2. POSTURE IN BASIC PETROLEUM PROBLEM
  3. LIFE-CYCLE DURATION